

[1]

TYPE EXAMINATION CERTIFICATE



[2]

Equipment or Protective System intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

[3]

Type Examination Certificate Number: **DEMKO 19 ATEX 2240X Rev. 2**

[4]

Product: **Safety Relay Modules, Type PSR-PC51-1NO-1NC-24DC-SC, Type PSR-PC51-1NO-1NC-24DC-SP, Type PSR-PC52-1NO-1NC-24DC-SC, Type PSR-PC52-1NO-1NC-24DC-SP, Type PSR-PC21-2NO-2NC-24DC-SC, Type PSR-PC21-2NO-2NC-24DC-SP**

[5]

Manufacturer: **PHOENIX CONTACT GmbH & Co. KG**

[6]

Address: **Flachsmarktstrasse 8 Blomberg, 32825 Germany**

[7]

This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8]

UL International Demko A/S certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014.

The examination and test results are recorded in confidential report no. **DK/ULD/ExTR19.0024/02.**

[9]

Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018

EN IEC 60079-7:2015/A1:2018

EN IEC 60079-15: 2019

Where additional criteria beyond those given here have been used, they are listed at item 18 in the Schedule.

[10]

If the sign "X" is placed after the certificate number, it indicates that the product is subject to the "Specific Conditions of Use" listed under item 17 of this certificate.

[11]

This Type examination certificate relates only to the design of the specified product, and not to specific items of product subsequently manufactured.

[12]

The marking of the product shall include the following (marking is provided in the Schedule as a part of item 15, if applicable):



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Certification Manager

Thomas Wilson

This is to certify that the sample(s) of the Product described herein ("Certified Product") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

Date of issue: 2020-02-25

Re-issued: 2025-02-24

Certification Body

UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark
Tel. +45 44 85 65 65, info.dk@ul.com, www.ul.com

Schedule

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Description of Product:

The Relay Modules Type PSR-PC51, -PC52 and -PC21 are used for galvanic separation and performance adjustment of signals in the process industry / process engineering. It couples digital output signals of e.g. fail-safe control systems to the peripheral and guarantees safe switching in the event of a fault using relay contacts.

Nomenclature for type PSR- Series:

Type PSR-PC51-1NO-1NC-24DC-SC, Type PSR-PC51-1NO-1NC-24DC-SP

Type PSR-PC52-1NO-1NC-24DC-SC, Type PSR-PC52-1NO-1NC-24DC-SP

Type PSR-PC21-2NO-2NC-24DC-SC, Type PSR-PC21-2NO-2NC-24DC-SP

PSR- PC51- 1NO- 1NC - 24DC - SC
I II III IV V VI

I. PSR

II. PC51
PC52
PC21

III. Output Configuration Relay Contacts
1NO – One normally open contact
2NO – Two normally open contact

IV. Output Configuration Relay Contacts
1NC – One normally closed contact
2NC – Two normally closed contact

V. Control Voltage
24DC – 24Vdc

VI. Terminal Configuration
SC – Screw Terminal
SP – Cage Clamp Terminal

Temperature range:

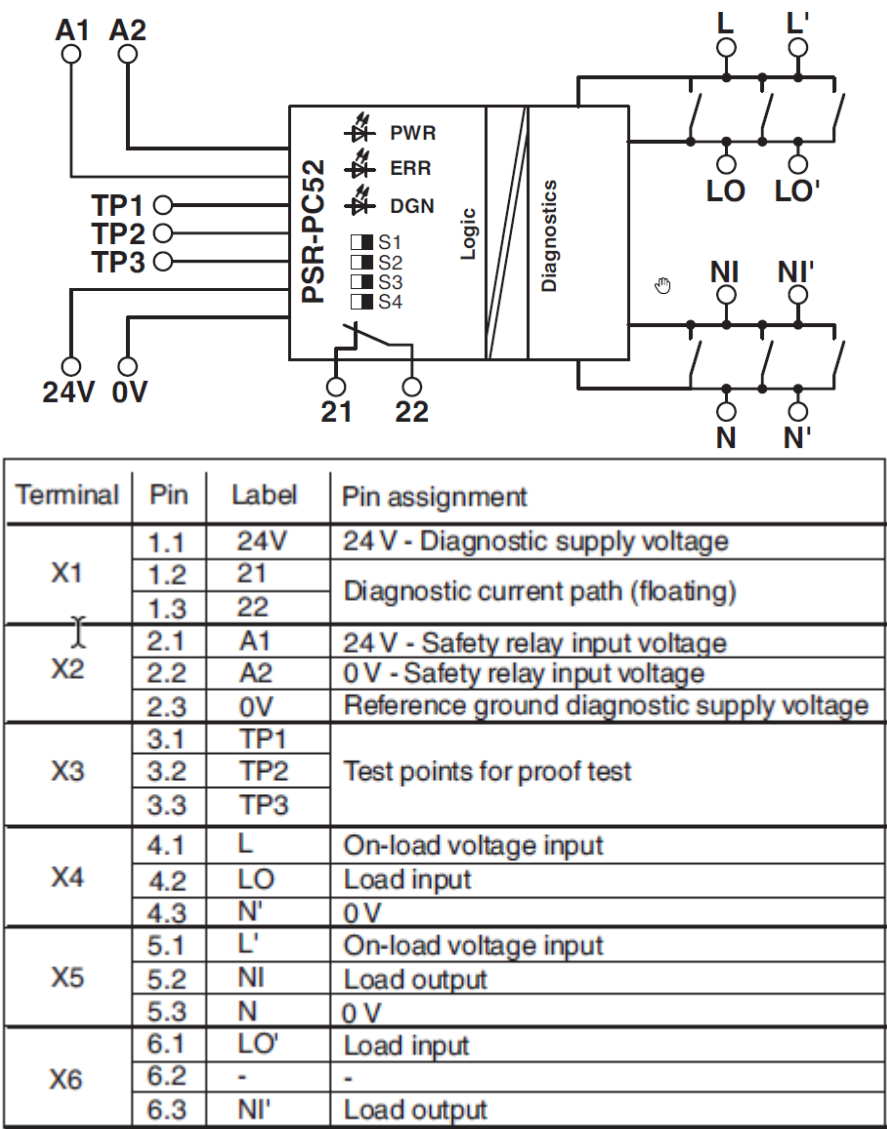
The ambient temperature range is as shown below.

Electrical data

Model Type	PSR-PC51-1NO-1NC-24DC-SC PSR-PC51-1NO-1NC-24DC-SP PSR-PC52-1NO-1NC-24DC-SC PSR-PC52-1NO-1NC-24DC-SP		
Input A1-A2	24 V DC, 75 mA		
Input 24V-0V	24 V DC, 35 mA		
Output	NO-contact		NC-contact
	250 V AC / 24 V DC 3 A, Resistive B300, R300	250 V AC / 24 V DC 1 A, Resistive B300, R300	24 V DC 100 mA Resistive
Ambient Temperature	-25°C to 50°C		-25°C to 60°C

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Type	PSR-PC21-2NO-2NC-24DC-SC PSR-PC21-2NO-2NC-24DC-SP			
Input	A1/A2 24 V DC, 46mA		A3/A4 24 V DC, 46mA	
Output	13/14 NO-contact	21/22 NC-contact	33/34 NO-contact	41/42 NC-contact
	250V AC, 24V DC 6A Resistive B300, R300	24V DC 100mA Resistive	250V AC, 24V DC 6A Resistive B300, R300	24V DC 100mA Resistive
Ambient Temperature	-40 °C to 65 °C		-40 °C to 65 °C	

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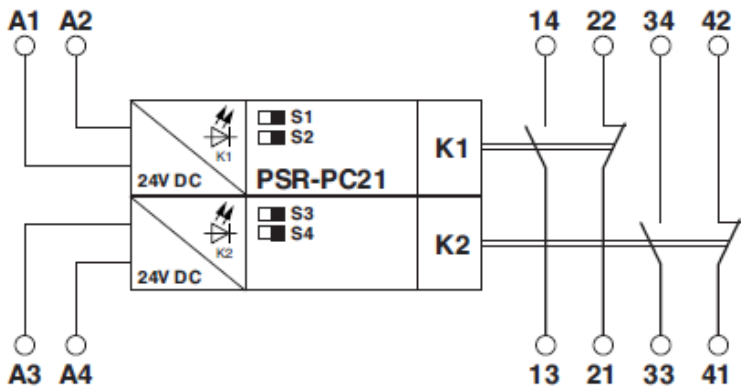


Figure 3 Block diagram

Key:

A1		24 V DC control
A2		0 V control
13/14	Chan- nel 1	Enabling current path (non-delayed, floating)
21/22		Confirmation current path (non-delayed, floating)
A3		24 V DC control
A4		0 V control
33/34	Chan- nel 2	Enabling current path (non-delayed, floating)
41/42		Confirmation current path (non-delayed, floating)
K1/K2	Channel 1/Channel 2	
S1/S2	DIP switches for channel 1	
S3/S4	DIP switches for channel 2	

Routine tests:
Between the power supply terminals with Relay terminals all suitable for 230 V ac/ 250 V working voltage and the terminals suitable for less than 90 V ac, with a test voltage derived from the applicable industrial standard or with 1500 V ac +5% or 2100 V dc +5 % for 1 minute or with 1.2 times of the test voltage for ≥ 100 millisecond.
Because the creepage and clearance dimensions are rigidly controlled by tooling in the manufacturing process, the routine tests will be performed on a statistical basis in accordance with ISO 2859-1 with an acceptance quality limit (AQL) of 0.04

[16] Descriptive Documents
The scheduled drawings are listed in the report no. provided under item no. [8] on page 1 of this Type Examination Certificate.

- [17] Specific Conditions of Use:
- The equipment is intended for installation in an area providing at least a pollution degree 2 environment as defined by EN 60664-1.
 - The device shall be installed in an enclosure (control or distributor box) that fulfills a type of protection of EN 60079-0 and at least IP54 (EN 60529) degree of protection.
 - The device shall be connected to supply circuits where the rated voltage cannot be exceeded by 140% caused by transient disturbances.
 - The device must be installed in accordance with the instructions in the manual document no. 109207_en_01, section 13, regarding the rating and distances between devices. •

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Essential Health and Safety Requirements

The Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9.

Additional information

The manufacturer shall inform the certification body concerning all modifications to the technical documentation.

The trademark



will be used as the company identifier on the marking label.